BRAIN & NECK CIRCLE OF WILLIS **SKULL & ARTERIES Medial Frontal Branches:** Anterior communicating a. Deep temporal a. Lateral orbitofrontal a. Parietal branch of superficial Middle Anterior cerebral a. Supraorbital a. Ascending frontal a. temporal a. Anterior Precentral a. Middle cerebral a. Ophthalmic a. Frontal branch of Callosomarginal a. Supra-Middle superficial temporal a. Central a: trochlear a. temporal a. Frontopolar a. Lenticulo-Anterior parietal a. Ascending striate a. Pericallosal a. frontal a. Posterior Maxillary a parietal a Anterior Posterior communpericallosal a. icating a. Angular a. Infraorbital a. Supra-Middle Parieto-occipital a. orbital a. Precentral a. temporal Angular a. Posterior Posterior temporal a. Descending ciliary a. Occipitalis a palatine a Middle temporal a. Central a. Posterior Posterior Superior of retina communicating a. Posterior temporal a labial a. auricular a. Internal Ophthalmic a. Inferior carotid a Ascending Temporal branch-Basilar a. Anterior cerebral a. labial a. pharyngeal a. of the posterior Internal acoustic cerebral a. Mentalis a. Posterior (labyrinthine) a. Vertebral a. communicating a. Inferior Posterior Anterior External carotid a. alveolar a. cerebral a. temporal a. Internal carotid a. Anterior inferior Submentalis a. Transverse facial a. External carotid a. cerebral a. Basilar a Internal carotid a Lingual a. Deep lingual a. Common carotid a. Superior L. middle cerebral a Subclavian a. cerebellar a. Vertebral a. Superior thyroid a. Posterior cerebral a Vertebral a **HEPATIC PORTAL VEINS BLOOD VESSELS** Hepatic v.v. Vein Esophagus Inferior vena cava R. gastric v. L. gastric v. Artery R. branch-Tunica intima: L. branch Liver (transparent) Endothelium Stomach **Funica intima:** Portal v. (transparent) Endothelium Cystic v. -Spleen Subendothelial Gallbladder layer Splenic v. endothelial layer Pancreaticoduodenal v.v. L. gastroepiploic v. Internal elastic Tunica media Pancreas lamina Inferior R. colic flexure Tunica adventitia Tunica media mesenteric v. Duodenum-Tunica adventitia Valve L. colic v.v. Middle colic v. Terminal arteriole Superior mesenteric Postcapillary Inferior Meta-arteriole venule Inferior vena cavamesenteric v. Precapillary R. colic v. Jejunal & ileal v. sphincters Intercellular cleft Ascending colon-Descending colon Ileocolic v.v. Basal lamina\* Cecal vv. Fenestrations Sigmoid v.v. Tight junction Cecum Sigmoid colon Endothelial cell\* Capillary bed Appendix Appendicular v. Superior rectal v. Cell nucleus Common iliac v.v **Blood flow** Red blood cell Rectum CORONARY ARTERIES ARTERIES OF BRAIN L. coronary a. Middle infraorbital a. Aortic valve & CARDIAC VEINS Oblique v. of L. atrium Anterior cerebral a. Anterior communicating a. Recurrent a. (of Heubner Branch to sinoatrial node Great cardiac v. Internal carotid a. Lateral orbitofrontal a Circumflex Anterior R. atrial branch of R. coronary a. branch of L. Ascending frontal a Posterior coronary a. communicating a. Middle cerebral a Anterior cardiac v.v. & branches Anterior Posterior cerebral a. interventricular R. coronary a. branch (L. anterior Middle & lateral Pontine a.a. descending) of L. R. marginal branch of R lenticulostriate a.a. coronary a coronary a.-Internal acoustic Anterior choroidal a. (labyrinthine) a. Coronary sinus Small cardiac v Anterior inferior Superior cerebellar a. Opening of cerebellar a. coronary sinus Posterior L. Basilar a. ventricular branch Anterior spinal a. Middle cardiac v. Vertebral a. Posterior interventricular Posterior v. of Posterior spinal a: Posterior inferior branch of R. coronary a. L. ventricle cerebellar a. (Inferior view) (posterior descending a.) Edge of the transparent heart

## **NOTE TO STUDENT**

Use this comprehensive study guide in the classroom, in the gym, at home or anywhere you need complete anatomical information. This guide is not designed to take the place of classroom attendance.

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